

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Withdrawn) A laser irradiation method comprising:
blocking a low-intensity part of a laser beam emitted from a laser oscillator by making the laser beam pass through a slit; and
projecting an image formed at the slit to an irradiation surface by a convex cylindrical lens;

wherein the laser beam is shaped into a linear beam on the irradiation surface.

2. (Withdrawn) A laser irradiation method comprising:
blocking a low-intensity part of a laser beam emitted from a laser oscillator by making the laser beam pass through a slit; and
projecting an image formed at the slit to an irradiation surface by a convex cylindrical lens;

wherein the laser beam is shaped into a linear beam on the irradiation surface, and

wherein the slit, the convex cylindrical lens, and the irradiation surface are arranged so that a distance (M1) between the slit and the convex cylindrical lens and a distance (M2) between the convex cylindrical lens and the irradiation surface satisfy following equations 1 and 2:

$$M1=f(s+D)/D \quad [\text{Equation 1}]$$

$$M2=f(s+D)/s \quad [\text{Equation 2}]$$

where s is a width of the slit, D is a length of the linear beam in a long-side direction, and f is a focal length of the convex cylindrical lens.

3. (Withdrawn) The laser irradiation method according to claim 1 or claim 2, wherein a mirror for bending a traveling direction of the laser beam by a predetermined angle is provided between the laser oscillator and the slit.

4. (Withdrawn) The laser irradiation method according to claim 1 or claim 2, wherein a second convex cylindrical lens is provided between the convex cylindrical lens and the irradiation surface in such a way that the second convex cylindrical lens is rotated by 90° from the convex cylindrical lens.

5. (Withdrawn) A laser irradiation apparatus comprising:
a laser oscillator;
a slit for blocking a low-intensity part of a laser beam emitted from the laser oscillator; and
a convex cylindrical lens for projecting to an irradiation surface an image formed at the slit in which the low-intensity part is blocked;
wherein the laser beam is shaped into a linear beam on the irradiation surface.

6. (Withdrawn) A laser irradiation apparatus comprising:
a laser oscillator;
a slit for blocking a low-intensity part of a laser beam emitted from the laser oscillator; and
a convex cylindrical lens for projecting to an irradiation surface an image formed at the slit in which the low-intensity part is blocked;
wherein the laser beam is shaped into a linear beam on the irradiation surface,
and
wherein the slit, the convex cylindrical lens, and the irradiation surface are arranged so that a distance (M1) between the slit and the convex cylindrical lens and a

distance (M2) between the convex cylindrical lens and the irradiation surface satisfy following equations 1 and 2:

$$M1=f(s+D)/D \quad \text{[Equation 1]}$$

$$M2=f(s+D)/s \quad \text{[Equation 2]}$$

where s is a width of the slit, D is a length of the linear beam in the long-side direction, and f is a focal length of the convex cylindrical lens.

7. (Withdrawn) The laser irradiation apparatus according to claim 5 or claim 6, wherein a mirror for bending a traveling direction of the laser beam by a predetermined angle is provided between the laser oscillator and the slit.

8. (Withdrawn) The laser irradiation apparatus according to claim 5 or claim 6, wherein a second convex cylindrical lens is provided between the convex cylindrical lens and the irradiation surface in such a way that the second convex cylindrical lens is rotated by 90° from the convex cylindrical lens.

9. (Original) A laser irradiation method comprising:
bending a laser beam emitted from a laser oscillator by a mirror tilted by a predetermined angle;
making the laser beam pass through a first convex spherical lens so as to form a linear beam due to astigmatism;
blocking a low-intensity part of the linear beam by a slit; and
projecting to an irradiation surface an image of the linear beam at the slit by using a second convex spherical lens;
wherein the laser beam is shaped into a linear beam.

10. (Currently Amended) A laser irradiation method comprising:

bending a laser beam emitted from a laser oscillator by a mirror tilted by a predetermined angle;

making the laser beam pass through a first convex spherical lens so as to form a linear beam due to astigmatism;

blocking a low-intensity part of the linear beam by a slit; and

projecting to an irradiation surface an image of the linear beam at the slit by using a second convex spherical lens;

wherein the slit, the second convex ~~[[cylindrical]]~~ spherical lens, and the irradiation surface are arranged so that a distance (M1) between the slit and the second convex ~~[[cylindrical]]~~ spherical lens and a distance (M2) between the second convex ~~[[cylindrical]]~~ spherical lens and the irradiation surface satisfy equations 1 and 2:

$$M1=f(s+D)/D \quad \text{[Equation 1]}$$

$$M2=f(s+D)/s \quad \text{[Equation 2]}$$

where s is a width of the slit, D is a length of the linear beam in the long-side direction, and f is a focal length of the second convex spherical lens.

11. (Original) A laser irradiation apparatus comprising:

a laser oscillator;

a mirror tilted by a predetermined angle for guiding a laser beam emitted from the laser oscillator to a first convex spherical lens;

the first convex spherical lens for shaping the laser beam reflected on the mirror into a linear beam due to astigmatism;

a slit for blocking a low-intensity part of the linear beam; and

a second convex spherical lens for projecting to an irradiation surface an image of the linear beam at the slit.

12. (Currently Amended) A laser irradiation apparatus comprising:

a laser oscillator;

a mirror tilted by a predetermined angle for guiding a laser beam emitted from the laser oscillator to a first convex spherical lens;

the first convex spherical lens for shaping the laser beam reflected on the mirror into a linear beam due to astigmatism;

a slit for blocking a low-intensity part of the linear beam; and

a second convex spherical lens for projecting to an irradiation surface an image of the linear beam at the slit;

wherein the slit, the second convex ~~[[cylindrical]]~~ spherical lens, and the irradiation surface are arranged so that a distance (M1) between the slit and the second convex ~~[[cylindrical]]~~ spherical lens and a distance (M2) between the second convex ~~[[cylindrical]]~~ spherical lens and the irradiation surface satisfy equations 1 and 2:

$$M1=f(s+D)/D \quad \text{[Equation 1]}$$

$$M2=f(s+D)/s \quad \text{[Equation 2]}$$

where s is a width of the slit, D is a length of the linear beam in the long-side direction, and f is a focal length of the second convex spherical lens.

13. (Original) A laser irradiation method comprising:

blocking a low-intensity part of a laser beam emitted from a laser oscillator by making the laser beam pass through a slit; and

projecting an image formed at the slit to an irradiation surface by a convex spherical lens;

wherein the laser beam is shaped into a linear beam on the irradiation surface, and

wherein the slit, the convex spherical lens, and the irradiation surface are arranged so that a distance (M1) between the slit and the convex spherical lens and a distance (M2) between the convex spherical lens and the irradiation surface satisfy following equations 1 and 2:

$$M1=f(s+D)/D \quad \text{[Equation 1]}$$

$$M2=f(s+D)/s \quad [\text{Equation 2}]$$

where s is a width of the slit, D is a length of the linear beam in a long-side direction, and f is a focal length of the convex spherical lens.

14. (New) A laser irradiation method comprising:

blocking a low-intensity part of a laser beam emitted from a laser oscillator by making the laser beam pass through a slit; and

projecting an image formed at the slit to an irradiation surface by a convex spherical lens;

wherein the laser beam is shaped into a linear beam on the irradiation surface.

15. (New) A laser irradiation method comprising:

blocking a low-intensity part of a laser beam emitted from a laser oscillator by making the laser beam pass through a slit; and

projecting an image formed at the slit to an irradiation surface by a convex spherical lens;

wherein the laser beam is shaped into a linear beam on the irradiation surface, and

wherein the slit, the convex spherical lens, and the irradiation surface are arranged so that a distance (M1) between the slit and the convex spherical lens and a distance (M2) between the convex spherical lens and the irradiation surface satisfy following equations 1 and 2:

$$M1=f(s+D)/D \quad [\text{Equation 1}]$$

$$M2=f(s+D)/s \quad [\text{Equation 2}]$$

where s is a width of the slit, D is a length of the linear beam in a long-side direction, and f is a focal length of the convex spherical lens.

16 (New) The laser irradiation method according to claim 14 or claim 15,

wherein a mirror for bending a traveling direction of the laser beam by a predetermined angle is provided between the laser oscillator and the slit.

17. (New) The laser irradiation method according to claim 14 or claim 15,
wherein a second convex spherical lens is provided between the convex spherical lens and the irradiation surface in such a way that the second convex spherical lens is rotated by 90° from the convex spherical lens.

18. (New) A method for fabricating a semiconductor device comprising:
forming a semiconductor film over a substrate;
blocking a low-intensity part of a laser beam emitted from a laser oscillator by making the laser beam pass through a slit; and
projecting an image formed at the slit to an irradiation surface of the semiconductor film by a convex spherical lens;
wherein the laser beam is shaped into a linear beam on the irradiation surface.

19. (New) A method for fabricating a semiconductor device comprising:
forming a semiconductor film over a substrate;
blocking a low-intensity part of a laser beam emitted from a laser oscillator by making the laser beam pass through a slit; and
projecting an image formed at the slit to an irradiation surface by a convex spherical lens;
wherein the laser beam is shaped into a linear beam on the irradiation surface,
and
wherein the slit, the convex spherical lens, and the irradiation surface are arranged so that a distance (M1) between the slit and the convex spherical lens and a distance (M2) between the convex spherical lens and the irradiation surface satisfy following equations 1 and 2:

$$M1=f(s+D)/D \quad [\text{Equation 1}]$$

$$M2=f(s+D)/s \quad [\text{Equation 2}]$$

where s is a width of the slit, D is a length of the linear beam in a long-side direction, and f is a focal length of the convex spherical lens.

20. (New) The laser irradiation method according to claim 18 or claim 19, wherein a mirror for bending a traveling direction of the laser beam by a predetermined angle is provided between the laser oscillator and the slit.

21. (New) The laser irradiation method according to claim 18 or claim 19, wherein a second spherical lens is provided between the convex spherical lens and the irradiation surface in such a way that the second convex spherical lens is rotated by 90° from the convex spherical lens.